



OP03021

1632 x 1536 Product Brief



Industry's Lowest-Power Single-Chip Microdisplay for the Latest Generation Smart Glasses

The new OP03021 is the industry's only single-chip liquid crystal on silicon (LCOS) small panel with ultra-low power for next-generation smart glasses. The OP03021 LCOS panel delivers 1632 x 1536 resolution at 90 Hz, enabling next-generation smart glasses to

achieve higher resolution with a wider field of view (FoV)—key features in demand by consumers to provide a more immersive, realistic and comfortable augmented reality (AR) experience as smart glasses experience widespread adoption.

The OP03021 LCOS panel features a 3.0-micron pixel. It comes in a compact 0.26-inch optical format in a small FPCA package. It uses a MIPI-C-PHY 1-trio interface. Samples are available now, and it will be in mass production in the first half of 2026.

Applications

- AR/MR glasses
- Head mount display

Features

- **Native resolution:** 1632 x 1536
- **Display resolution:** 1632 x 1472
- **Power supply:**
 - Core: 0.865V ±5%
 - Logic: 1.8 ±5%
 - MIPI: 0.865V ±5%
 - MIPI I/O: 1.8V ±5%
 - Digital I/O: 1.8V ±10%
 - Pixel array: 3.6-4.0V ±5%
- **LC operational temperature range:**
 - 10°C to 70°C
- **C-PHY:** Supports up to 2.5 Gsps/trio
- **Pixel pitch:** 3.0 μm
- **Package dimensions:**
 - 7.986 x 25.3 x 2.116 mm



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